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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,183	03/26/2004	Keiji Shimizu	04200/LH	8009
1933	7590	12/28/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 Fifth Avenue 16TH Floor NEW YORK, NY 10001-7708			FINEMAN, LEE A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,183

Applicant(s)

SHIMIZU ET AL.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 3,6-8 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2,4-5 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I in the reply filed on 14 October 2005 is acknowledged.

Claims 3,6-8 and 13-15 withdrawn from further consideration pursuant to 37 CFR

- 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Objections

2. Claims 1-2, 4-5 and 9-12 are objected to because of the following informalities:

Claim 1 includes the limitation "a illumination device" and "a illumination axis" which is grammatically incorrect. The dependent claims inherit the deficiencies of the claims from which they depend. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-2, 4-5 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimizu et al., US 2003/0063376 A1.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-2, Shimizu et al. disclose in fig. 8 an illumination device for microscope, which has a illumination axis (OB), comprising: illumination means (23), which is a light source and emits rays of illumination light, for illuminating a specimen (11); a field stop projection lens (19), which is located on the illumination axis between the illumination means and specimen (fig. 8); a light deflector array (50), which is located on the illumination axis between the illumination means and field stop projection lens in conjugation with the specimen (fig. 8), the light deflector array having micro optical deflection portions (DMD), which individually deflect the rays of illumination light from the illumination means; and switch means (20) for switching between a state in which the rays of illumination light is applied to the specimen and a state in which the rays of illumination light is not applied to the specimen (page 4, section [0058]).

Regarding claims 4-5, Shimizu et al. further disclose wherein the switch means (20) comprises a shutter (page 4, section [0058]), which is allowed to open and close, located on the

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illumination axis between the light deflector array and the field stop projection lens (fig. 8), and prevents transmission of the rays of illumination light as necessary.

Regarding claims 9-12, Shimizu et al. further disclose comprising a drive controller (24), which controls a deflection operation of the micro optical deflection portions (50) and a switching operation of the switch means (20) and wherein the drive controller controls the switching operation of the switch means after the deflection operation of the micro optical deflection portions (they can be controlled in any order).

5. Claims 1-2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Schalz, US 6,243,197.

Regarding claims 1-2, Schalz discloses in fig. 1 an illumination device for microscope, which has a illumination axis (4), comprising: illumination means (2), which is a light source and emits rays of illumination light, for illuminating a specimen (6); a field stop projection lens (20), which is located on the illumination axis between the illumination means and specimen (fig. 1); a light deflector array (5), which is located on the illumination axis between the illumination means and field stop projection lens in conjugation with the specimen (fig. 1), the light deflector array having micro optical deflection portions (DMD, see claim 28), which individually deflect the rays of illumination light from the illumination means (see claim 28); and switch means (7 with 5) for switching between a state in which the rays of illumination light is applied to the specimen and a state in which the rays of illumination light is not applied to the specimen (column 4, lines 11-14).

Regarding claim 9, Schalz further discloses comprising a drive controller (7), which controls a deflection operation of the micro optical deflection portions (5) and a switching operation of the switch means (7 with 5).

6. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Desimone et al., US 2003/0086145 A1.

Regarding claims 1-2, Desimone et al. disclose in figs. 2 and 3 an illumination device (30') for microscope, which has a illumination axis (60), comprising: illumination means (46), which is a light source and emits rays of illumination light, for illuminating a specimen (45); a field stop projection lens (52, 54), which is located on the illumination axis between the illumination means and specimen (fig. 2); a light deflector array (48), which is located on the illumination axis between the illumination means and field stop projection lens in conjugation with the specimen (fig. 2), the light deflector array having micro optical deflection portions (DMD), which individually deflect the rays of illumination light from the illumination means (page 4, section [0045]); and switch means (82, fig. 3) for switching between a state in which the rays of illumination light is applied to the specimen and a state in which the rays of illumination light is not applied to the specimen.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-5 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Desimone et al.

Regarding claims 4-5, Desimone et al. further disclose wherein the switch means (82, fig. 3) comprises a shutter (page 4, section [0048]), which is allowed to open and close, and prevents transmission of the rays of illumination light as necessary. Desimone et al. discloses the claimed invention except for the rearrangement of the shutter to be located on the illumination axis between the light deflector array and the field stop projection lens. It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the shutter to be located on the illumination axis between the light deflector array and the field stop projection lens, since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the shutter to be located on the illumination axis between the light deflector array and the field stop projection lens for the purpose of also preventing any stray light from the light deflector array while using the second light source. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

Regarding claims 9-12, Desimone et al. further discloses comprising a drive controller (80), which controls a deflection operation of the micro optical deflection portions (DMD) but is silent to the controller also controlling the switching operation of the switch means after the deflection operation of the micro optical deflection portions. Official Notice is taken that is very well known in the art to have a controller control many different components of an apparatus to

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provide a more compact device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the drive controller of Desimone et al. also control the switching operation at any time including after the deflection operation of the micro optical deflection portions to make the device more compact.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sander, US 2004/0047034 A1; Miyawaki et al., US 2004/0061914 A1; Jovin et al., US 6,128,077; Krause, US 5,587,832; and MacAulay, US 6,483,641 B1 all disclose microscopes with DMD arrays an/or shutters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF
December 23, 2005


MARK A. ROBINSON
PRIMARY EXAMINER